Transport Canada Transports Canada

TP 1624

Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

Canada

Ce rapport est aussi disponible en français.

REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES ATTENDING THE CAPSIZING OF A SKIFF OF THE CANADIAN FISHING VESSEL "TONINA" IN PORT ELIZA, VANCOUVER ISLAND, ON DECEMBER 20, 1988 WITH LOSS OF TWO LIVES.

REPORT No. 526

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REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES ATTENDING THE CAPSIZING OF A SKIFF OF THE CANADIAN FISHING VESSEL "TONINA" IN PORT ELIZA, VANCOUVER ISLAND, ON DECEMBER 20, 1988 WITH LOSS OF TWO LIVES.

Particulars of vessel

Name	"TONINA"
Official Number	347124
Port of Registry	Vancouver, B.C.
Gross Tonnage	13.99
Net Tonnage	9.51
Length	9.94
Breadth	3.47
Depth	1.46
Built	in 1973
Material	Reinforced plastic
Propulsion	Diesel motor, 240 BHP
Owner	Huynh Van Quy, Surrey, B.C.

Navigating Equipment

Radar	1 Furuno
VHF	1 Adelco
Echo Sounder	1 Furuno
Magnetic Compass	1 on board

Particulars of Small Boat

Name	Naden
Model	N-14 HS
length	4.27 m
Breadth	1.53 m
Material	Aluminum

Propulsion	Outboard motor Capstan-Mercury 25
Capacity	420 kg

Note:

1. All times in this report are expressed in Pacific Standard Time (UTC minus 8 hours).
2. A glossary of abbreviations and terms can be found following the findings in this report.
3. All references to the Canada Shipping Act in this report refer to Chapter S-9-1970 of the Revised Statutes of Canada.

Background

Accompanied by fishing vessel "HAPPY TIME IV", the fishing vessel "TONINA", with her operator and seven clam diggers on board, went to dig for clams in Port Eliza Inlet, Vancouver Island. Both vessels anchored about 30 metres offshore. The vessels' skiffs were used to transport personnel to the beach. While returning from shore to the "TONINA", her skiff capsized and threw those on board into the water. The operator of the "TONINA" and a clam digger were drowned.

Particulars of deceased

1.	Name	:	Huynh Van Quy
	Position aboard	:	Operator of the "TONINA" and the skiff
	Age	:	40
	Address	:	Surrey, B.C.
2.	Name	:	Nguyen Thanh Binh
	Position	:	Clam digger
	Age	:	25
	Address	:	Vancouver, B.C.

Narrative

On December 19, 1988 the fishing vessels "TONINA" and "HAPPY TIME IV" departed from Zeballos, bound for Port Eliza Inlet to harvest clams on the remote beaches. They had a complement of 8 and 9 people, respectively. The two vessels reached Port Eliza Inlet early in the morning and were at anchor two miles south from the head of the inlet, about 30 m off its western shore.

Both teams went ashore using their skiffs and spread

over the beach to harvest clams. The trips from ship to shore and vice versa during the day were uneventful. The following day, December 20, 1988 the teams resumed their clam harvest on both sides of the inlet.

At about 1700 hours the operator of the "TONINA" started his outboard motor boat in order to embark the clam diggers who were waiting on the eastern shore. It was reported that he embarked 7 of his team and about ten bags (each weighing approximately 45 kg) of clams. He then proceeded westward across the inlet towards the "TONINA". While approaching his vessel he saw two other clam diggers from the "HAPPY TIME IV" awaiting on the beach on the western shore of the inlet just across the anchorage. He managed to pick them up together with their bags of clams. When he accelerated the motor to make headway towards his vessel, people shouted "we are sinking!" as the boat dipped into the low waves and took on water. The operator reduced his speed, and the bow of the skiff began to rise slowly; but when he accelerated again the small boat settled into the water and capsized, throwing everyone into the cold water. They were all capable swimmers, but due to their winter clothing together with their chest waders they made poor progress in the icy water. However, they managed to swim to the beach dragging with them the operator who appeared to be exhausted or perhaps unconscious. It was about 1730 hours, December 20,1988. At that time, the sky was clear, there was no wind and the sea was relatively calm.

Leaving the operator on the beach, the survivors went quickly into the surrounding bush, called out for help, and attempted to make a fire to get warm. When they returned to the operator, who was still lying near the water where they had left him, he was found to be dead. Later, realizing that one of the crew members was missing, a search began for him. It was then reported that someone had seen the missing man disappearing under the surface of the water.

At the time of the casualty, the rest of the party from the "HAPPY TIME IV" was a good distance away, near the head of the inlet. When they saw the fire and faintly heard shouting, they suspected that the other team might be in trouble and they rushed to the scene, on foot, along the beach. They had previously beached their skiff near the survivors, but it had floated free and drifted away from the shore. This prevented using the skiff to transport survivors. The capsized boat was salvaged by both teams and used to recover the drifting skiff. A group then returned to the "HAPPY TIME IV".

Once back aboard the "HAPPY TIME IV" the operator tried

to send a distress message on the VHF radio channel 16 but was unsuccessful. It was found later that one of the crew members had disconnected the radio antenna by error; thus the message could not be transmitted. The operator then returned ashore and walked to the Port Eliza logging camp to ask for help in reporting the accident. The RCMP Tahsis as well as CGRS Tofino were informed of the casualty. The survivors stayed on the beach until the RCMP arrived on the scene at about 2000 hours. Water and beach searches for the missing person were conducted from 2130 to midnight but to no avail. The body of the operator of the "TONINA" was transported to Gold River Hospital on December 21, 1988 where pronouncement of his death as a result of drowning was made at 1230 hours.

The search by boats and by plane for the missing Nguyen Thanh Binh resumed the following day. The searches were unsuccessful. It was not until 1230 hours on December 23, 1988 that RCMP divers located the body of the missing person in 17 m of water where the accident occurred. The body was recovered and transported to Campbell River hospital where pronouncement of death as a result of drowning was made.

Analysis

1. History

During the clam season from November to April, the two fishing vessels "TONINA" and "HAPPY TIME IV" were based in Zeballos (Photos 1 & 2). The crews and clam diggers resided in Vancouver. They travelled by road to join their vessels twice a month, remaining on board each time for a period of about 5 days. The vessels were used to transport the clam diggers from Zeballos to various beaches where they could collect clams.

The vessels had valid commercial fishing licences and the clam diggers were in possession of valid personal commercial fishing licences. They were not required to hold clam licences.

The "TONINA", 14 grt, was not inspected by the Ship Safety Branch of the Canadian Coast Guard nor was she required to be under the Regulations made pursuant to the Canada Shipping Act. (See Annex I).

The skiff which was involved in the casualty was a transom stern open boat of formed aluminum construction. The transverse thwarts were closed in and filled with permanent foam plastic buoyancy. The top of the transom was shaped and stiffened to accommodate an outboard motor. (Photo 3). The maker's name plate fixed on the

inboard face of the transom indicated the maximum load was not to exceed 420 Kg.

2. Weather

Marine forecasts issued by the Pacific Weather Centre of Environment Canada at 1645 hours Tuesday December 20, 1988 for the period ending 1700 hours Wednesday with an outlook for the following 24 hours were:
West Coast Vancouver Island - South section

Gale warning continued. Winds SE 25 to gales 35 shifting to Northwesterly 20 to 30 overnight. Winds easing to Westerly 10 to 20 Wednesday afternoon. Showers lowering the visibility locally to 2 miles.
Outlook for Thursday - north moderate to strong westerlies.

The weather at the time of the casualty in Port Eliza Inlet, well sheltered inside the Esperanza Inlet, was reported to be fine with a calm sea. All witnesses agreed that weather was not a contributing factor to the tragedy.

The time of sunset was 1628 hours and the nautical twilight was 1749 hours.

3. Place of Casualty

The two fishing vessels were at anchor about 2 miles from the head of Port Eliza Inlet, in 20 m of water and about 30 m off the western shoreline. Port Eliza is the westernmost of three inlets branching north from Esperanza Inlet (See chart). It has high shores and its fairway is narrowed in places by offshore rocks. A drying flat and low swamp land is at the head of the inlet. There is a road that runs along the beach.

4. Tides

Times and height for Port Eliza referenced on Tofino are given in the Tide Tables Volume 6 with a negligible difference as follows:

0330	1.80 m
0940	3.80 m
1645	0.50 m
2310	3.10 m

At the time of the casualty it was about 1730 hours and the tide was on the turn. Tidal streams in Port Eliza were weak. There was no noticeable current which could

be a contributing factor to the casualty.

5. The crew

The regular crew of the "TONINA" consisted of a deckhand and the operator, who was the owner. In this case the fishing vessel was used only to transport groups of clam diggers from Zeballos to Port Eliza, about 2 hours steaming. The clam diggers were originally "boat people" from Vietnam, recently settled in Vancouver. All except the operator had no regular employment and were working casually as clam diggers. They had no sea training but had a common background of living many years in South East Asia refugee camps.

The operator of the "TONINA" had 15 years of experience in fishing, 3 of which were on the West coast of Vancouver Island.

The operator of the "HAPPY TIME IV" had more than 5 years of experience in fishing in Vietnam, and 3 years on the West coast of Vancouver Island.

6. The casualty

It was reported that at about 1700 hours the operator Huynh Van Quy started the 25 HP outboard motor of the small boat and went to pick up his team standing on the eastern shore of the inlet. On board the small boat were 8 people including the operator, with their catch of some 10 bags of clams weighing about 45 kg each. The average weight of each person was about 55 kg. The 25 HP outboard motor, fuel and fuel tank weighed about 65 kg, for a total load of 955 kg, which was more than twice the maximum loading indicated on the skiff's capacity plate. However, the operator managed to make headway towards his vessel. During the short trip across the Port Eliza Inlet the boat shipped water, but the occupants feverishly bailed it out as well as they could. When the small boat reached the western side of the inlet where the two fishing vessels were at anchor, the operator saw 2 other people waiting on the western shore. He went to pick them up instead of off-loading the people already crowded on board.

No one raised their concern about the overloading of the small boat, so that 2 more people and their catch were also loaded. This meant that more than 200 kg was added to the already overloaded boat, which was now carrying 1155 kg, about 735 kg more than the maximum loading of 420 kg indicated on the skiff's; capacity plate. Those

on board were happily engaged in talking about their catch as the operator accelerated the outboard motor in an attempt to make a good headway towards his vessel. The bow dipped into the water.

The people sitting at the bow shouted that they were sinking. The operator reduced his speed and the boat's bow rose a little. When he accelerated again the boat plunged into the water. People jumped to their feet, and the boat capsized throwing everyone overboard. They were all capable swimmers but due to their heavy clothes together with their rubber pants and boots, they struggled in the cold water. By helping one another, they managed to swim ashore. One of them, later identified as Nguyen Thanh Binh was observed by some of the swimmers to have disappeared under the water. The operator, who appeared exhausted or unconscious was dragged to the beach by the survivors. The time was about 1730 hours, December 20, 1988. Once ashore, the survivors moved quickly to the bush and started to build a fire, while leaving the operator lying on the beach. Reportedly, the survivors felt their limbs had gone numb. When they returned to check on the operator they found him dead. The body of Nguyen Thanh Binh was recovered from the water off the beach three days later by the RCMP divers.

7. Life Saving Equipment

The Small Fishing Vessel Inspection Regulations made pursuant to the Canada Shipping Act, state in sections 52 and 53 of Part II:

Application

52. This Part applies to fishing vessels not exceeding 15 tons, gross tonnage, that are not sailing ships.

Life Saving Equipment, Lights and Signals

53. (1) In this section, "approved", when used in reference to an article, means that the article has been built in accordance with the standards therefor in the Life Saving Equipment Regulations and has been approved by the Board.

(2) Every fishing vessel not exceeding 12.2 m in length shall carry

(a) one approved lifejacket for each person on

board;

(b) one approved lifebuoy fitted with 27 m of line; and

(c) one watertight can containing six approved self-igniting flares...

There were 2 lifejackets, 2 lifebuoys and the required flares aboard the "TONINA". As there were regularly 8 people aboard, there was thus an insufficient number of lifejackets. There was no lifejacket aboard the skiff at the time of the casualty and no one aboard was wearing a lifejacket or a personal flotation device.

8. The Skiff

The skiff in use at the time of the casualty had been built as a pleasure craft but it was not used for this purpose.

The recommended safe limits of engine horse-power (25 HP) and the recommended gross load capacity of the skiff (420 kg) were indicated on the horse-power and Load Capacity Plate prescribed for pleasure craft by the Small Vessel Regulations. (See annex II). The plate was fixed to the skiff's transom.

While these limits are not applicable to the skiff for operation other than as a pleasure craft, the limits should have served as a guide to the skiff's operator. In fact, at the time of the casualty, the gross load of the skiff was about 1155 kg which exceeded the gross load limit on the plate by some 735 kg.

9. The survival time

It was reported that the water temperature was about 2°C.

A Canadian Red Cross Society publication entitled Cold Water Survival shows that with a sea water temperature of 2°C, an average person has a strong possibility of survival if rescued within 15 minutes. After 15 minutes and up to 1¼ hours a person may survive if rescued but the victim will be weak and unable to help himself. After 1¼ hours the chances of survival are slim. (See Annex III).

10. Search and Rescue

The RCMP Tahsis and CGRS Tofino were informed of the casualty by phone at about 1800 hours. The survivors stayed on the beach until the RCMP arrived at 2000 hours. The deceased operator was taken on board the "TONINA" which was later taken to and made fast at Port Eliza logging camp dock.

A water and beach search was conducted from 2130 to 2400 hours, December 20, 1988 for the missing person but in vain. An aerial search on December 21, 1988 met with negative result.

It was not until 1230 hours on December 23, 1988 that the RCMP divers could locate the body of Nguyen Thanh Binh in 17 m of water where the incident occurred.

11. Autopsy report

The body of the operator, Huynh Van Quy, was transported to Gold River Hospital on December 21, 1988 for examination. The initial report revealed the cause of death was due to drowning. The generalised condition indicated a co-existing degree of hypothermia.

The body of Nguyen Thanh Binh was transported to Campbell River Hospital on December 23, 1988 for examination. The initial report revealed that the cause of death was due to drowning. The condition indicated a component of hypothermia.

Findings

On December 20, 1988, during hours of twilight while transporting crew members from shore to ship, the open outboard motor powered skiff shipped water and capsized throwing everyone into the cold water due to the boat being overloaded, causing the operator and one clam digger to drown.

It would appear that the following factors contributed to the casualty:

- the boat was carrying in excess of 1155 kgs, when it was approved for carriage of 420 kgs and thus had little freeboard;
- the acceleration was rapid and excessive; and
- the operation was approached with a casual attitude

as it was being carried out close inshore and over short distances.

The cause of the deaths by drowning would appear to be due to:

- no lifejacket or PFDs were worn;
- there was no lifejacket or other approved personal flotation device in the skiff;
- the men were heavily dressed; and
- the water was very cold.

Other Findings

The clam diggers were casual workers and not experienced fishermen familiar with the dangers involved.

Due to the poor physical condition of the survivors after gaining the beach, and lack of first aid and CPR training, the unconscious operator was at first left on the beach and no attempts were made at resuscitation.

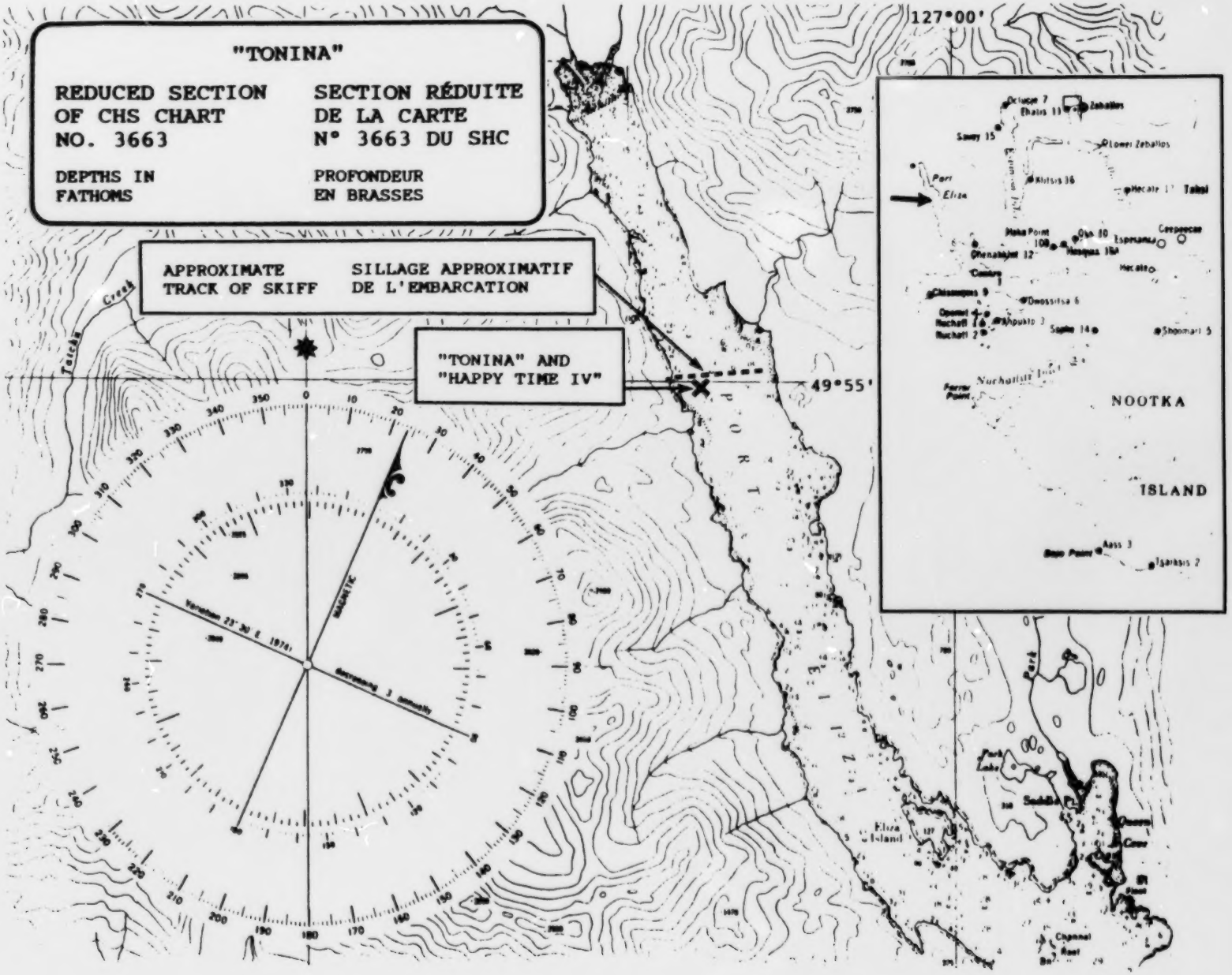
The "TONINA" did not carry a sufficient number of lifejackets for the number of people on board.

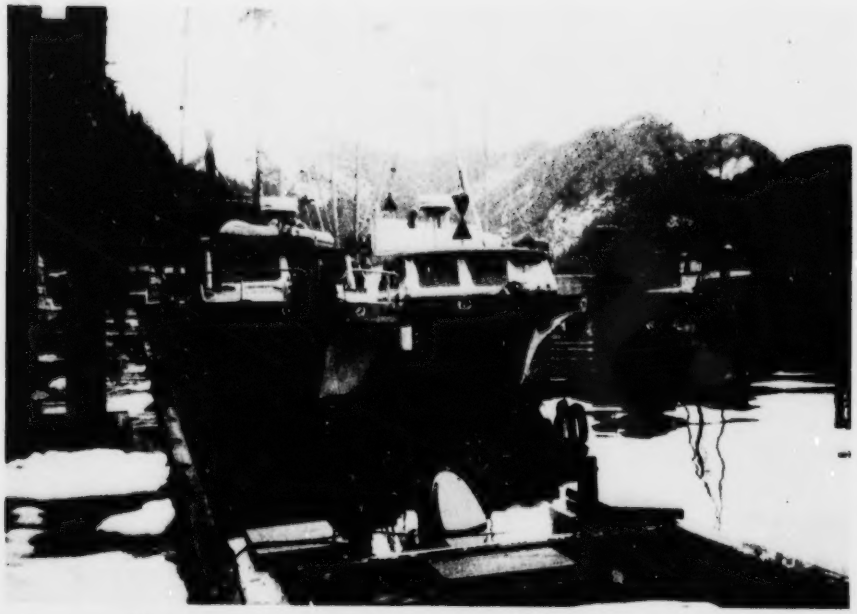
MARINE CASUALTY INVESTIGATIONS
TRANSPORT CANADA
110 O'CONNOR STREET
OTTAWA, ONTARIO.
K1A 0N5

JUNE, 1989

Glossary

BHP	Brake horsepower
CGRS	Canadian Coast Guard Radio Station
CPR	Cardiopulmonary Resuscitation
PFD	Personal Flotation Device
Pleasure craft	A craft used exclusively for pleasure that does not carry paying passengers
RCMP	Royal Canadian Mounted Police
Skiff	A craft used in this report, to assist in fishing operations and for the transport of personnel
VHF	Very High Frequency (Radio-telephone)


"TONINA"
REDUCED SECTION OF CHS CHART NO. 3663
SECTION RÉDUITE DE LA CARTE N° 3663 DU SHC
DEPTHS IN FATHOMS
PROFONDEUR EN BRASSES
APPROXIMATE TRACK OF SKIFF
SILLAGE APPROXIMATIF DE L'EMBARCATION
"TONINA" AND "HAPPY TIME IV"
127°00'
49°55'
NOOTKA
ISLAND
Tahsis Creek
Variation 23° 30' E 1976
Decreasing 3' annually

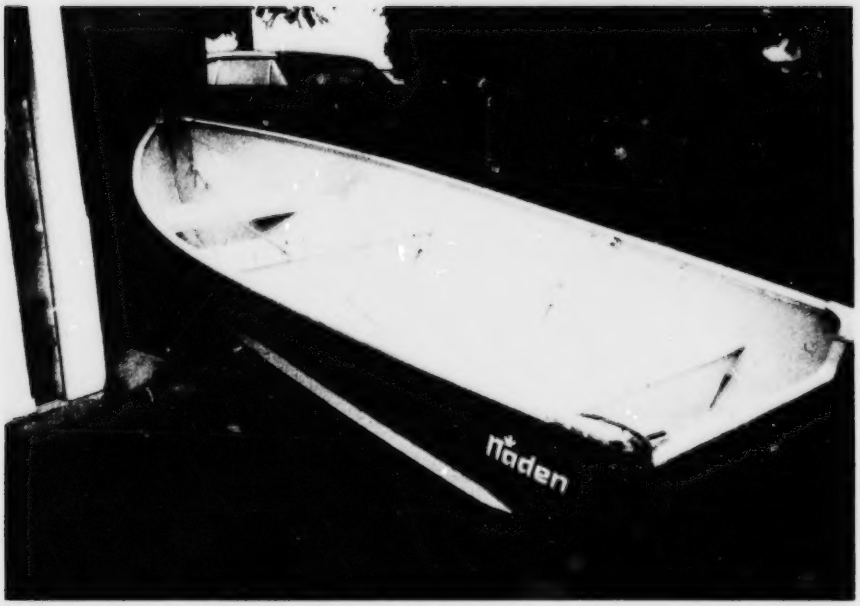


The FVs "TONINA" and "HAPPY TIME IV" based in Zeballos during the winter.

Les B.P. "TONINA" et "HAPPY TIME IV" basés à Zeballos pendant l'hiver.

The small boats secured on board the fishing vessels.

Les embarcations sont saisies à bord des bateaux de pêche.



The skiff which capsized.

L'embarcation qui a chaviré.

CHAP. S-9-1970

CANADA SHIPPING ACT

LOI SUR LA MARINE MARCHANDE DU CANADA

Exemption

468. (1) Steamships in excess of fifteen tons gross tonnage, and not in excess of one hundred and fifty tons gross tonnage that are not passenger steamships are exempt from the provisions of this Part relating to annual inspection and instead shall be inspected every fourth year, and such steamships, if fitted with a boiler operating at a pressure in excess of fifteen pounds per square inch, are in addition to such inspection every fourth year subject to inspection of their boilers, life saving equipment and fire extinguishing equipment annually, in like manner and as if they were steamships in excess of one hundred and fifty tons gross tonnage.

(2) Steamships not in excess of fifteen tons gross tonnage that are not passenger steamships are exempt from the provisions of this Part relating to annual inspection, except that such steamships, if fitted with a boiler operating at a pressure in excess of 103 kPa, are subject to inspection of their boilers, life saving equipment and systems for precautions against fire as provided in subsection (1)."

Exemption

468. (1) Les navires à vapeur d'une jauge brute de plus de quinze tonneaux mais d'au plus cent cinquante tonneaux, qui ne sont pas des navires à vapeur à passagers, sont exemptés des dispositions de la présente Partie relatives à l'inspection annuelle et doivent, en remplacement, être inspectés tous les quatre ans, et ces navires, s'ils sont munis d'une chaudière soumise à une pression supérieure à quinze livres par pouce carré, sont, en sus de cette inspection quadriennale, assujettis à l'inspection annuelle de leurs chaudières, de leur équipement de sauvetage et de leur matériel d'extinction d'incendie, tout comme s'ils étaient des navires à vapeur d'une jauge brute de plus de cent cinquante tonneaux.

Idem

(2) Les navires à vapeur d'une jauge brute d'au plus quinze tonneaux, qui ne sont pas des navires à vapeur à passagers, sont exemptés des dispositions de la présente partie relatives à l'inspection annuelle, avec cette réserve que si ces navires à vapeur sont munis d'une chaudière soumise à une pression supérieure à 103 kPa, ils sont assujettis à l'inspection de leurs chaudières, de leur équipement de sauvetage et de leur système de prévention d'incendie et de lutte contre celui-ci, comme le prévoit le paragraphe (1).»

CHAPTER 1486

CANADA SHIPPING ACT

Small Fishing Vessel Inspection Regulations

REGULATIONS RESPECTING THE CONSTRUCTION AND INSPECTION OF FISHING VESSELS NOT EXCEEDING 24.4 m REGISTERED LENGTH THAT DO NOT EXCEED 150 TONS, GROSS TONNAGE

Short Title

1. These Regulations may be cited as the *Small Fishing Vessel Inspection Regulations*.

PART II

FISHING VESSELS NOT EXCEEDING FIFTEEN TONS, GROSS TONNAGE

Application

52. This Part applies to fishing vessels not exceeding 15 tons, gross tonnage, that are not sailing ships.

Periodic Inspection

57. Every fishing vessel in excess of 5 tons, gross tonnage, if propelled by steam shall have the following parts inspected annually by an inspector:

(*a*) boilers, boiler mounting and steam pipes;

(*b*) life saving equipment; and

(*c*) fire extinguishing equipment.

CHAPITRE 1486

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement sur l'inspection des petits bateaux de pêche

RÈGLEMENT CONCERNANT LA CONSTRUCTION ET L'INSPECTION DES BATEAUX DE PÊCHE D'UNE LONGUEUR RÈGLEMENTAIRE D'AU PLUS 24,4 m ET D'UNE JAUGE BRUTE D'AU PLUS 150 TONNEAUX

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur l'inspection des petits bateaux de pêche*.

PARTIE II

BATEAUX DE PÊCHE D'UNE JAUGE BRUTE D'AU PLUS QUINZE TONNEAUX

Application

52. La présente partie s'applique aux bateaux de pêche qui, ayant une jauge brute d'au plus 15 tonneaux, ne sont pas des voiliers.

Inspection périodique

57. Les pièces suivantes de tout bateau de pêche d'une jauge brute de plus de 5 tonneaux, s'il est mû par la vapeur, seront examinées annuellement par l'inspecteur:

a) les chaudières, leurs garnitures et les conduites de vapeur;

b) l'équipement de sauvetage; et

c) le matériel d'extinction d'incendie.

CHAPTER 1487

CANADA SHIPPING ACT

Small Vessel Regulations

REGULATIONS RESPECTING SMALL VESSELS

Short Title

1. These Regulations may be cited as the *Small Vessel Regulations*.

PART III

HORSEPOWER AND LOAD CAPACITY PLATE

Application

23. This Part applies to pleasure craft other than pleasure craft that are registered or licensed in a country other than Canada and that comply with the laws of that country.

Plate for Vessel

"24 (1) Every vessel not over 5 m in length that is equipped with a detachable outboard motor of 7.5 kW or more, or with two or more such motors of 7.5 kW or more in the aggregate, shall have permanently attached to it in a plainly visible position, either"

(*a*) a plate issued in respect of that vessel pursuant to subsection (2); or

(*b*) a plate, similar to a plate issued pursuant to subsection (2), issued in respect of that vessel jointly by the Canadian Boating Federation and the Department of Transport prior to July 1, 1962.

"(2) The Minister may, on application and on payment of a fee of $2.50, issue"

(i) a plate marked to show the recommended safe limits of engine horsepower and the recommended gross load capacity for that vessel, or,...

CHAPITRE 1487

LOI SUR LA MARINE MARCHANDE DU CANADA

Règlement sur les petits bâtiments

RÈGLEMENT CONCERNANT LES PETITS BÂTIMENTS

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur les petits bâtiments*.

PARTIE III

PLAQUE DE PUISSANCE ET DE CHARGE

Application

23. La présente partie s'applique aux embarcations de plaisance à l'exception de celles qui sont immatriculées ou munies d'un permis délivré dans un autre pays que le Canada et qui répondent aux prescriptions des lois de ce pays.

Plaque pour bâtiment

«24 (1) Tout bâtiment d'au plus 5 m de longueur qui est muni d'un moteur hors bord amovible d'une puissance de 7,5 kW ou plus, ou de deux ou plusieurs moteurs de ce genre, d'une puissance globale de 7,5 kW ou plus, doit porter en permanence, apposée bien en évidence,»

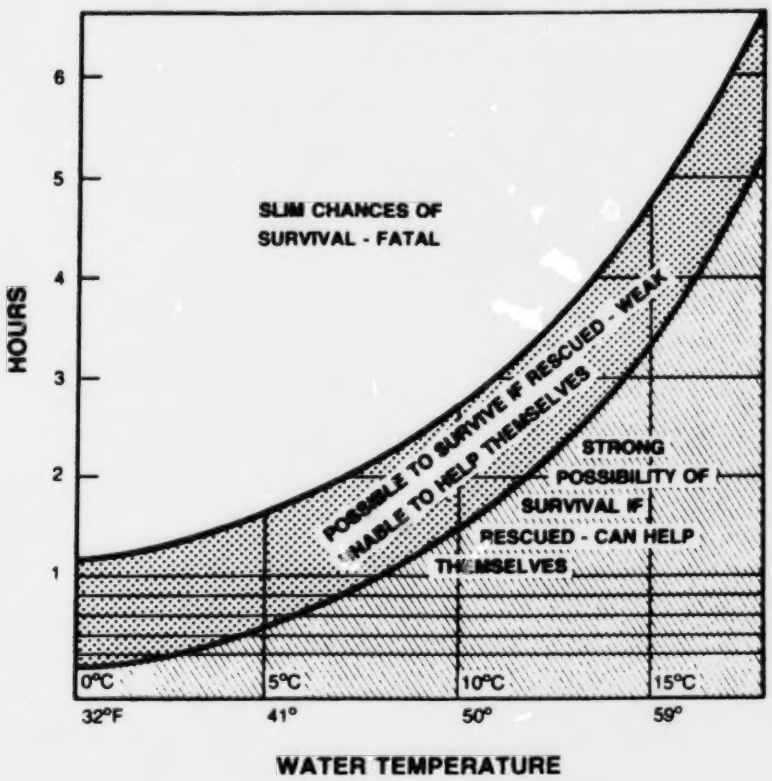
a) soit une plaque délivrée pour ce bâtiment en vertu du paragraphe (2);

b) soit une plaque semblable à une plaque délivrée en vertu du paragraphe (2), délivrée conjointement pour ce bâtiment par la Fédération nautique canadienne et le ministère des Transports avant le 1er juillet 1962.

«(2) Le Ministre peut, sur réception d'une demande et du droit de 2,50 $, délivrer :»

(i) soit une plaque indiquant la puissance en chevaux du moteur et la charge brute qu'il est recommandé de ne pas dépasser pour des raisons de sécurité,....

COLD WATER SURVIVAL



The accompanying graph shows average predicted survival times of average, adult humans in water of different temperatures. The figures are based on experimental cooling of average men and women who were holding still in ocean water and wearing a standard lifejacket and light clothing. The graph shows, for example, that predicted survival time is about 2½-3 hours in water of 10°C (50°F). Predicted survival time is increased by extra body fat and decreased by small body size. Although women generally possess slightly more fat than men they cool slightly faster due to their usually small body size. However, for comparable sizes, the man will cool faster.

"COLD WATER SURVIVAL"
CANADIAN RED CROSS